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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/957,187	10/24/1997	EKKEHARD BEER	514425-3566	9736

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EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 08/19/2002

25

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/957,187

Applicant(s)

BEER ET AL

Examiner

Kevin R Krueger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 30, 2002 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10-15, 17-20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 5,532,030) in view of (a) Silverman (US 3,786,221) or Sincock (US 3,900,120) and (b) Valyi (US 5,702,665), Hale et al. (US 4,325,797), or Ryder (US 4,285,657).

Hirose discloses a multi-layer laminate in which the sheets or film based on polyolefins are laminated to form a material for packaging. The multi-layer laminate comprises a layer made from at least one cycloolefin-based resin selected from the group consisting of (a1) an ethylene/cycloolefin random copolymer obtained by polymerizing a cycloolefin (represented by 1 or 2) with ethylene, (a2) a ring opening

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polymer of the cycloolefins or its hydrogenation product and (a3) a graft-modification product of (a1) or (a2) (column 1, lines 13-16, 54-64 and column 2, lines 1-5). The structure of the cycloolefin component is given in column 2 wherein n may be zero or 1, m may be zero or any positive integer, q may be zero or 1 and substituents R_1 - R_{18} may be a radical selected from the group consisting of hydrogen atom, halogen atom, halogen atom and hydrocarbon groups and wherein the R groups may form a monocyclic or polycyclic ring by combining with each other. The halogen atoms may be fluorine, chlorine, bromine or iodine and the hydrocarbon groups may be C_1 - C_{20} alkyl groups, C_1 - C_{20} halogenated alkyl groups, C_3 - C_{15} cycloalkyl groups and C_6 - C_{20} aromatic hydrocarbons (col 4, lines 8-25). The ethylene/cycloolefin random copolymer usually contains the constituent unit derived from ethylene in an amount of 52-90mol% and the constituent unit derived from a cycloolefin in an amount of 10-48mole%. The ethylene/cycloolefin copolymer may contain constituent units derived from other copolymerizable monomers such as monocyclic olefins in an amount of 20mole% or less (column 21, lines 64-67; column 22, lines 1-4, 66-67; column 23, lines 31 through column 24, lines 1-2). The cycloolefin-based resin may be blended with other resin and various additives (column 29, lines 56-67). The multi-layer laminate may be subjected to monoaxial or biaxial stretching to produce sheet or film material suitable for packaging drugs, foods, and cigarettes. Such a material is superior in moisture-proof properties and therefore may be used as a blister pack, bottle or other type of container (column 34, lines 33-67 and column 35, lines 1-19). The thickness of the laminate is 100 as indicated in Table 1 in columns 35 and 36.

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Hirose does not teach the claimed puncture resistance or the claimed moisture impermeability. However, Silverman teaches that molecular orientation improves thermoplastics' impact resistance (col 1, lines 11+). (NOTE: the test method by which applicant measures puncture resistance is the same test method utilized in the art to measure impact resistance. Therefore, the examiner will utilize "puncture resistance" and "impact resistance" as synonyms in this application). Sincock similarly teaches that molecular orientation of thermoplastic materials is known in the art to improve the material's impact resistance. Furthermore, it is known in the art that molecular orientation of thermoplastic materials improve the material's gas impermeability (see '657, col 1, lines 10-15; '797, col 6, lines 23+); and '665, col 1, lines 10+). Therefore, the examiner takes the position that it would have been obvious to one of ordinary skill in the art to vary the molecular orientation of the film taught by Hirose in order to optimize the film's water vapor permeability and impact resistance. The examiner notes that moistureproofness and mechanical strength are desired by Hirose (see col 34, lines 60+).

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 5,532,030) in view of (a) Silverman (US 3,786,221) or Sincock (US 3,900,120) and (b) Valyi (US 5,702,665), Hale et al. (US 4,325,797), or Ryder (US 4,285,657), as applied to claims 1-15, 17-20, and 23 above, and further in view of Tanaka et al. (US 5,556,920). Hirose is relied upon as above, but does not specifically state that the multilayer film may contain inorganic filler. However, Tanaka discloses a monoaxially stretched polypropylene film composition comprising a crystalline polypropylene and a

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monocyclic olefin polymer (refer to abstract). Anti-blocking agents that may be used include silica, alumina, and calcium carbonate (col 6, lines 66-67). Accordingly, it would have been obvious to one of ordinary skill in the art to fabricate polymeric films that contain fillers particularly since Tanaka suggest the addition of anti-blocking agents leads to films of improved transparency, image clarity, and formability (col 8, lines 40-43 and 51-56).

4. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 5,532,030) in view of (a) Silverman (US 3,786,221) or Sincok (US 3,900,120) and (b) Valyi (US 5,702,665), Hale et al. (US 4,325,797), or Ryder (US 4,285,657), as applied to claims 10-15, 17-20, and 23 above, and further in view of Schirmer (US 4,442,147) and US2002/0037393A1 (Strobel et al). Hirose in view of (a) Silverman or Sincok and (b) Valyi, Hale, or Ryder is relied upon as above. None of the references teach the claimed film elongation at break or film tear strength in the machine direction. However, the film taught by Hirose desirably possesses high mechanical strength and easy hand cutting (col 35, lines 12+). With respect to mechanical strength, Strobel teaches orientation of thermoplastic films typically produce films with a decreased elongation at break (paragraph 21). Furthermore, Schirmer teaches that film orientation will affect a film's tear strength in the machine direction (col 2, lines 45+). Thus, it would have been obvious to one of ordinary skill in the art to control the degree and direction of orientation in order to control the film's elongation at break and the tear strength in the machine direction.

Response to Arguments

Applicant's arguments with respect to claims 10-23 have been considered but are moot in view of the new ground(s) of rejection. However, the examiner would like to take this opportunity to address the Hatke declaration (Paper #20) in hopes of expediting prosecution. The declaration supposedly shows that modulus of elasticity, tear strength and elongation at break increase with stretching. The examiner initially notes that Applicant must supply the office with a more detailed analysis of the data in order for the examiner to fully evaluate the declaration. For example, the examiner finds the comparison of Examples 1-4 inconclusive, since the thickness of each sample varies. Thus, no conclusions can be drawn with respect to the rest of the data because more than one variable (orientation and thickness) is varied in the examples. A comparison of examples 2 and 4 is found inconclusive for the same reason. The examiner also cannot determine the difference between the film's of examples 3 and 4. Examples 3 and 4 seem to comprise the same composition, with the same degree of orientation, and the same thickness. Furthermore, the examiner notes that claims 9-11 are not commensurate in scope with the claims because the claims are not directed toward a blended composition. The examiner further notes that only claims 21 and 22 claim tear strength and a film elongation at break. Thus, the remainder of the claims are not commensurate in scope with Applicant's arguments. Furthermore, it is known in the art that modulus of elasticity and tear strength improve with the orientation of thermoplastics (see US 5,198,176; col 1, lines 28+). It is also known in the art that puncture resistance improves with orientation (see discussion above). The examiner

notes that examples 5-8 show an increase in puncture resistance as orientation increases. Thus, the examiner considers the declaration to demonstrate results that are expected by one of ordinary skill in the art.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. EP0384694 teaches orientation of films comprising cycloolefin copolymers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 703-305-0025. The examiner can normally be reached on Monday-Friday from 7:00a.m. to 4:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is 703-305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

KRK


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700